REMARKS

Applicant respectfully requests reconsideration of this application as amended.

Amendments to the Specification

The abstract has been amended to be more descriptive of the invention claimed. No new matter has been added.

Office Action Summary

Claims 1-9 and 17-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,243,384 of Eriksson ("Eriksson") in view of alleged prior art admissions.

Claims 10-16 and 25-28 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Eriksson in view of U.S. Patent 6,208,623 of Rochberger ("Rochberger").

Status of Claims

At the time the Office Action was mailed, claims 1-28 were pending in the application. In the present response, claims 1, 10, 17 and 25 have been amended to more particularly point out what applicants regard as the invention. Claims 3, 8, 9, 12, 13, 19, 20, 24 and 28 have been amended as to antecedent references for consistency with amended claims 1, 10, 17 and 25. The amended claims are supported by the specification and no new material has been added. No claims have been added or cancelled. Therefore, claims 1-28 remain pending in the application.

Applicants reserve all rights with respect to the applicability of the doctrine of equivalents.

Claim Rejections Under 35 USC § 103

Claims 1-9 and 17-24

Claims 1-9 and 17-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Eriksson in view of alleged prior art admissions of applicants.

Claims 1-9

As amended, claim 1 recites:

> A method for automatically updating a source node in a PNNI ATM network, comprising:
> a) receiving, at a destination node in said PNNI ATM network, a notification of an address change of said destination node, wherein said destination node comprises a destination endpoint for a **soft permanent virtual circuit (SPVC)** that connects said source node with said destination node;
> b) **encoding said address change into a SIG field in a PNNI topology state element (PTSE)**; and
> c) issuing said PTSE from said destination node to said source node to automatically update said source node with said address change.

(emphasis added).

The Office Action states that claim 1 did not recite what the claimed method was used for nor how the SIG field in claim 1 is being used (11/3/06 Office Action, p. 2). Applicants submit that, as amended, claim 1 clearly recites a use for the method (automatically updating a source node in a PNNI ATM network), and clearly states how the SIG field is being used (to encode address change information). Moreover, applicants respectfully submit that the limitation "encoding [an] address change into a SIG field in a PNNI topology state element (PTSE)" for a soft permanent virtual circuit (SPVC) is patentably distinct and non-obvious in view of the cited prior art.

As noted in the specification of the present application, the endpoints in a SPVC in a conventional PNNI network are manually configured. Additionally, the contents of the SIG field in a conventional PNNI topology state element are not specified or

controlled by the PNNI protocol. In particular, the PNNI protocol does not teach or suggest "encoding address change information [of a SPCV destination node] into a SIG field in a PNNI topology state element," as recited in claim 1.

Eriksson is directed to a method and system for building a network topology database for a PNNI network (Eriksson, col. 1, line 66 to col. 3, line 3). Eriksson discloses an ATM switching node (20) implementing PNNI protocol, having a table that associates connection requests with routing information. Eriksson discloses that the node has table maintenance logic (78) that updates the table to consolidate records initiated by operator input and records developed from PNNI updating information. The PNNI updating information is generated by a PNNI protocol unit (56) which consults a **topology database** of the node (Eriksson, Abstract) (emphasis added). That is, Eriksson discloses a system and method for updating network topology and for routing messages accordingly. Eriksson does not teach or suggest "encoding address change information [of an SPCV destination node] into a SIG field in a PNNI topology state element," as recited in claim 1.

This distinction is made clear in the citation to Eriksson which is erroneously paraphrased in the Office Action of February 18, 2005 (Eriksson, col. 5, line 53 *et seq.*). Eriksson discloses, in pertinent part, that:

> [T]opology cell handling unit 52 recurrently receives **topology messages** (e.g., **PTSE**s) in the form of ATM cells from other nodes in the same peer group with ATM switching node 20. The topology cell handling unit 52 builds the **topology database** of ATM switching node 20. The routing determination unit 56, which functions as **the PNNI protocol unit (PNNIR) implements the node's path selection algorithm based on the information stored in the topology database**. Routes or paths determined by the path selection algorithm of routing determination unit 56 are forwarded to table maintenance logic 78 of table handling processor 70 for use in an appropriate results field of routing analysis section 84 of the consolidated table 80.

(Eriksson, col. 5, line 57 to col. 6, line 2) (emphasis added)

Eriksson does not teach or suggest an address change of an SPVC destination node (or any node) or any means for sending the address change information to a source node. The only information that Eriksson discloses as part of a PTSE is topology information (i.e., which nodes are operational and what other nodes they are connected to), which is their intended purpose as part of the PNNI protocol, and which facilitates route selection. Anyone having ordinary skill in the art will recognize that network topology and node addresses are two completely different entities.

In contrast to the teachings of Eriksson, claim 1 recites a method for transmitting address changes that operates outside of the PNNI protocol by encoding the information in a portion of the PTSE that is not defined by the PNNI protocol.

Accordingly, applicants submit that claim 1, as amended, is patentable over the suggested combination of Eriksson and the allegedly admitted prior art because Eriksson and the alleged prior art, alone or in combination, do not teach or suggest "encoding [an] address change into a SIG field in a PNNI topology state element (PTSE)," as recited in claim 1.

Given that claim 2-9 depend from claim 1, either directly or indirectly, and include all of the limitations of claim 1, applicants respectfully submit that claims 2-9 are also patentable over the suggested combination of Erikson and the alleged prior art.

Claims 17-24

As amended, claim 17 recites:

> A machine readable medium having stored thereon sequences of instructions which, when executed by a digital processing system, cause

said system to perform a method for automatically updating a source node in a PNNI ATM network, comprising:

in response to a notification of an address change to a destination node in said PNNI ATM network, **encoding said address change into a SIG field in a PNNI topology state element (PTSE)**;

issuing said PTSE from said destination node to said source node over a soft permanent virtual circuit (SPVC) connecting said destination node with said source node; and

updating said source node with said address change information.

(emphasis added).

The Office Action states that claim 17 did not recite what the claimed method was used for nor how the SIG field in claim 17 is being used (11/3/06 Office Action, p. 2). Applicants submit that, as amended, claim 17 clearly recites a use for the method (automatically updating a source node in a PNNI ATM network), and clearly states how the SIG field is being used (to encode address change information). Moreover, applicants respectfully submit that the limitation "encoding [an] address change into a SIG field in a PNNI topology state element (PTSE)" for a soft permanent virtual circuit (SPVC) is patentably distinct and non-obvious in view of the cited prior art.

As noted in the specification of the present application, the endpoints in a SPVC in a conventional PNNI network are manually configured. Additionally, the contents of the SIG field in a conventional PNNI topology state element are not specified or controlled by the PNNI protocol. In particular, the PNNI protocol does not teach or suggest "encoding address change information [of a SPCV destination node] into a SIG field in a PNNI topology state element," as recited in claim 17.

Eriksson is directed to a method and system for building a network topology database for a PNNI network (Eriksson, col. 1, line 66 to col. 3, line 3). Eriksson discloses an ATM switching node (20) implementing PNNI protocol, having a table that associates connection requests with routing information. Eriksson discloses that the

node has table maintenance logic (78) that updates the table to consolidate records initiated by operator input and records developed from PNNI updating information. The PNNI updating information is generated by a PNNI protocol unit (56) which consults a **topology database** of the node (Eriksson, Abstract) (emphasis added). That is, Eriksson discloses a system and method for updating network topology and for routing messages accordingly. Eriksson does not teach or suggest "encoding address change information [of an SPCV destination node] into a SIG field in a PNNI topology state element," as recited in claim 17.

This distinction is made clear in the citation to Eriksson which is erroneously paraphrased in the Office Action of February 18, 2005 (*citing* Eriksson, col. 5, line 53 *et seq.*). Eriksson discloses, in pertinent part, that:

> [T]opology cell handling unit 52 recurrently receives **topology messages** (e.g., **PTSE**s) in the form of ATM cells from other nodes in the same peer group with ATM switching node 20. The topology cell handling unit 52 builds the **topology database** of ATM switching node 20. The routing determination unit 56, which functions as **the PNNI protocol unit (PNNIR) implements the node's path selection algorithm based on the information stored in the topology database**. Routes or paths determined by the path selection algorithm of routing determination unit 56 are forwarded to table maintenance logic 78 of table handling processor 70 for use in an appropriate results field of routing analysis section 84 of the consolidated table 80.

(Eriksson, col. 5, line 57 to col. 6, line 2) (emphasis added)

Eriksson does not teach or suggest an address change of an SPVC destination node (or any node) or any means for sending the address change information to a source node. The only information that Eriksson discloses as part of a PTSE is topology information (i.e., which nodes are operational and what other nodes they are connected to), which is their intended purpose as part of the PNNI protocol, and which

facilitates route selection. Anyone having ordinary skill in the art will recognize that network topology and node addresses are two completely different entities.

In contrast to the teachings of Eriksson, claim 17 recites a method for transmitting address changes that operates outside of the PNNI protocol by encoding the information in a portion of the PTSE that is not defined by the PNNI protocol.

Accordingly, applicants submit that claim 17, as amended, is patentable over the suggested combination of Eriksson and the allegedly admitted prior art because Eriksson and the alleged prior art, alone or in combination, do not teach or suggest "encoding [an] address change into a SIG field in a PNNI topology state element (PTSE)," as recited in claim 17.

Given that claim 18-24 depend from claim 17, either directly or indirectly, and include all of the limitations of claim 17, applicants respectfully submit that claims 18-24 are also patentable over the suggested combination of Erikson and the alleged prior art.

Claims 10-16 and 25-28

Claims 10-16 and 25-28 have been rejected under 35 USC § 103(a) as being unpatentable over Eriksson in view of Rochberger.

Claims 10-16

As amended, claim 10 recites:

> A method for automatically updating a source node in a PNNI ATM network, comprising:
>
> a) receiving at said source node within said PNNI ATM network, information describing an address change of a destination node within said PNNI ATM network, wherein said destination node comprises a destination endpoint for a soft permanent virtual circuit (SPVC) that connects said source node with said destination node, said address change information comprising an old address for said destination node and a new address for said destination node, wherein **said address change information is encoded within a SIG field in a PNNI topology state element (PTSE)**;

b) comparing said old address for said destination node with an SPVC destination node address maintained by said source node to establish an SPVC connection supported by said source node; and

c) replacing said SPVC destination node address with said new address if said old address and said SPVC destination node address match.

(emphasis added)

As noted above, Eriksson does not teach or suggest address change information "wherein said address change information is encoded within a SIG field in a PNNI topology state element," as recited in claim 10. Rochberger discloses a method for combining PNNI and E-HSP protocols in an ATM network (Rochberger, Title & Abstract). Rochberger teaches that both PNNI and E-HSP are routing protocols. It is well-known that the E-HSP protocol does not include PNNI topology state elements by definition.

Rochberger teaches a method for updating an address table in a PNNI network node if the local topology of the node is changed (i.e., a new connection is made or an old connection is broken) (Rochberger, col. 6, lines 7-15). Rochberger does not teach or suggest that the address of a node is changed and does not teach or suggest any mechanism for transmitting node address change information within a SIG field in a PTSE.

Applicants submit, therefore, that Eriksson and Rochberger, either alone or in combination, do not teach or suggest the subject limitation of claim 10, and that claim 10, as amended, is patentable over the suggested combination of Eriksson and Rochberger.

Given that claims 11-16 depend from claim 10, either directly or indirectly, and include all of the limitations of claim 10, applicants submit that claims 11-16 are also patentable over the suggested combination of Eriksson and Rochberger.

Claims 25-28

As amended, claim 25 recites:

> A machine readable medium having stored thereon sequences of instructions which, when executed by a digital processing system, cause said system to perform a method for automatically updating a source node in a PNNI ATM network, comprising:
>
> a) receiving, at said source node within said PNNI ATM network, information describing an address change of a destination node within said PNNI ATM network, wherein said destination node comprises a destination endpoint for a soft permanent virtual circuit (SPVC) that connects said source node to said destination node, said address change information comprising an old address for said destination node and a new address for said destination node, wherein **said address change information is encoded within a SIG field in a PNNI topology state element (PTSE)**;
>
> b) comparing said old address with an SPVC destination node address maintained by said source node to establish an SPVC connection supported by said source node; and
>
> c) replacing said SPVC destination node address with said new address if said old address and said SPVC destination node address match.

As noted above, Eriksson does not teach or suggest address change information "wherein said address change information is encoded within a SIG field in a PNNI topology state element," as recited in claim 25. Rochberger discloses a method for combining PNNI and E-HSP protocols in an ATM network (Rochberger, Title & Abstract). Rochberger teaches that both PNNI and E-HSP are routing protocols. It is well-known that the E-HSP protocol does not include PNNI topology state elements by definition.

Rochberger teaches a method for updating an address table in a PNNI network node if the local topology of the node is changed (i.e., a new connection is made or an old connection is broken) (Rochberger, col. 6, lines 7-15). Rochberger does not teach or suggest that the address of a node is changed and does not teach or suggest any

mechanism for transmitting node address change information within a SIG field in a PTSE.

Applicants submit, therefore, that Eriksson and Rochberger, either alone or in combination, do not teach or suggest the subject limitation of claim 25, and that claim 25, as amended, is patentable over the suggested combination of Eriksson and Rochberger.

Given that claims 26-28 depend from claim 25, either directly or indirectly, and include all of the limitations of claim 25, applicants submit that claims 26-28 are also patentable over the suggested combination of Eriksson and Rochberger.

Conclusion

In conclusion, applicants respectfully submit that in view of the arguments and amendments set forth herein, the applicable rejections have been overcome.

If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Richard W. Thill at (408) 720-8300.

If there are any additional charges, please charge our Deposit Account No. 02-2666.

Respectfully submitted,

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